

1 (April 5, 2004)

2 **Masonry Wall Workmanship**

3 The Contractor shall construct the masonry wall in accordance with the standards
4 of masonry installation specified in Chapter 21 of the current Uniform Building
5 Code.

6
7 All masonry wall construction workers shall be thoroughly trained and experienced
8 in the necessary crafts, shall be completely familiar with the specified requirements
9 and methods needed for proper completion of the work, and shall be supervised at
10 the construction site at all times by the supervising journeyman masons as
11 approved by the Engineer.

12
13 **Sample Masonry Wall Panel**

14 The Contractor shall demonstrate workmanship by constructing a 1.220 meter by
15 1.220 meter sample panel of each type of masonry wall for the Engineer's
16 approval. The sample panel shall be constructed by the supervising journeyman
17 mason specified by the Contractor and as approved by the Engineer. The sample
18 panel shall show the general construction and appearance of the installed concrete
19 masonry units. The Contractor shall submit the sample panel to the Engineer for
20 approval, and shall not proceed with masonry wall construction until receiving the
21 Engineer's approval of the sample panel. The Contractor shall construct the
22 sample panel on a transportable platform, and shall relocate the sample panel as
23 directed by the Engineer as construction progresses.

24
25 If any of the supervising journeyman masons are replaced during the project, each
26 replacement supervising journeyman mason shall construct another sample panel
27 as a requirement for being approved by the Engineer for the supervising position.

28
29 The Contractor shall construct all masonry walls in accordance with the quality of
30 the sample panel approved by the Engineer. All masonry wall construction not
31 consistent with the quality of the approved sample panel shall be reconstructed by
32 the Contractor at no additional cost to the Contracting Agency.

33
34 The Contractor shall maintain the sample panel at the project site until all the noise
35 barrier walls are approved and accepted by the Engineer, at which time all sample
36 panels shall become the property of the Contractor and shall be disposed of in
37 accordance with Section 2-02.3.

38
39 **General Requirements**

40 All masonry materials stored on the project site shall be stored off the ground and
41 protected from weather. Concrete masonry units that are chipped, cracked, or
42 spalled on the faces or edges shall not be used.

43
44 The Contractor shall lay up all walls in running bond, plumb, level, and true to the
45 lines and dimensions as shown in the Plans. All head and bed joints shall be
46 solidly filled with mortar for a distance in from the face of the wall or unit not less
47 than the thickness of the longitudinal face shells.

48
49 **Mortar**

50 Mortar joints shall be of uniform thickness, 13 millimeters maximum. The
51 Contractor shall not change coursing or bonding after beginning work on a wall.
52 The Contractor shall tool all joints flush with adjacent surfaces to a dense brushed

1 finish. The split face side of wall shall have a concave smooth joint. The scored
2 split faces shall have a rake joint to match the depth of the scores.
3

4 **Temperature**

5 When air temperatures fall below 4C, grout mixing water and aggregate shall be
6 heated to produce a grout temperature between 4C and 50C. While grouting the
7 concrete masonry units, and for at least 24 hours after grouting the units, the
8 Contractor shall maintain the temperature of the concrete masonry units above
9 freezing. When atmospheric temperatures fall below minus 7C, the Contractor
10 shall erect enclosures around the concrete masonry units being grouted, and shall
11 maintain the enclosures for at least 24 hours after grouting the units.
12

13 The Contractor shall not perform masonry wall work when the air temperature is
14 below 4C on a falling thermometer, or when it is likely that the temperature will fall
15 below 4C before the mortar has set, except when appropriate provisions have been
16 made to heat and enclose the concrete masonry units and the work area as
17 approved by the Engineer. The Contractor may begin masonry wall work at 1C on
18 a rising thermometer.
19

20 **Grouting Cells**

21 Cells with steel reinforcing bars shall be grouted solid and compacted. Vertical
22 cells with steel reinforcing bars shall be aligned and filled to provide a continuous
23 unobstructed opening of the dimensions indicated, but in no case less than 50
24 millimeters by 75 millimeters. The Contractor shall provide cleanout openings at
25 the bottom of all cells to be filled at each stage of grout placement where the height
26 of grout placement is greater than 1.220 meters. The Contractor shall remove all
27 overhanging mortar and other obstructions and debris from the insides of the cells
28 being grouted. The Contractor shall seal all cleanouts, after the Engineer has
29 inspected and approved the cells. The Contractor shall place grout in lifts of 2.440
30 meters or less.
31

32 **Top Course**

33 The Contractor shall cover the tops of all exposed walls not being worked on with a
34 waterproof membrane, secured in place. All unfinished work shall be stepped back
35 for joining to new work. Toothing shall not be performed.
36

37 The top course shall be a solid grouted bond beam unit. The Contractor shall apply
38 a parge coat to the top of the wall.
39

40 **Cleaning Exposed Surfaces**

41 The Contractor shall clean all exposed masonry at the end of each day's work.
42 After final pointing, the Contractor shall remove all mortar spots and droppings.
43 The Contractor shall cut out all defective joints and repoint the joints solidly with
44 mortar. The Contractor shall protect all work from damage, stain, and discoloring.
45

46 The Contractor shall perform additional final cleaning prior to applying the
47 pigmented sealer. The Contractor shall remove all large particles of mortar before
48 wetting the wall. The Contractor shall saturate the concrete masonry units with
49 clean water and shall flush all loose mortar and dirt from the wall surface. The
50 Contractor shall scrub the wall surface with a stiff brush and a masonry cleaning
51 solution, in accordance with the cleaning solution manufacturer's instructions. The
52 Contractor shall thoroughly wash the wall surface of all cleaning solution, dirt, and

1 mortar crumbs with clean pressurized water. The Contractor shall not use acid
2 cleaning solutions to clean the wall surface. The Contractor shall protect all wall
3 surfaces adjacent to the sections of wall being cleaned.
4
5 **Masonry Sealer**
6 All exposed masonry surfaces shall receive two coats of masonry sealer, applied to
7 300 millimeters below finish ground line, from one of the masonry sealer products
8 specified in Section 6-12.2 as supplemented in these Special Provisions. The
9 masonry sealer shall be applied in accordance with the manufacturer's
10 recommendations.